

WHAT IS CLAIMED IS:

1. A gateway for communicating telecommunication information, comprising:

5 one or more packetization modules operable to receive first data packets from a first broadband network using a first data communications protocol and to extract first telecommunication information associated with a first subscriber from the first data packets, the packetization modules further operable to receive second data packets from a second broadband network using a second data communication protocol and to extract second telecommunication information associated with a
10 second subscriber from the second data packets; and

one or more telecommunication interface modules operable to communicate the first telecommunication information to a telecommunication network using a first telecommunication interface associated with the first subscriber and to communicate
15 the second telecommunication information to the telecommunication network using a second telecommunication interface associated with the second subscriber.


2. The gateway of Claim 1, wherein the packetization modules are further operable to identify the first subscriber associated with the first telecommunication information according to a data network address of the first data packets.
20

3. The gateway of Claim 1, wherein the data packet modules are further operable to identify the first subscriber associated with the first telecommunication information according to a subscriber identifier included in the first data packets.
25

4. The gateway of Claim 3, wherein the subscriber identifier is a name, address, or telephone number.

5. The gateway of Claim 1, further comprising one or more compression modules operable to de-compress the first telecommunication information using a first compression algorithm associated with the first subscriber and to de-compress the second telecommunication information using a second compression algorithm associated with the second subscriber.

6. The gateway of Claim 5, further comprising a memory operable to store a first subscriber profile associating the first subscriber with the first telecommunication interface and the first compression algorithm and a second subscriber profile associating the second subscriber with the second telecommunication interface and the second compression algorithm.

 7. ~~The gateway of Claim 5, further comprising a management module operable to select a first compression module supporting the first compression algorithm for de-compressing the first subscriber's telecommunication information and a second compression module supporting the second compression algorithm for de-compressing the second subscriber's telecommunication information.~~

8. The gateway of Claim 1, further comprising a management module operable to assign at least one time slot of a time division multiplexing (TDM) bus to communicate the first telecommunication information to a telecommunication interface module coupled to the first telecommunication interface.

9. The gateway of Claim 1, wherein the packetization modules receive the first data packets from a digital subscriber line multiplexer (DSLAM) and the second data packets from a cable modem termination system (CMTS) or a base station controller (BSC).

1. The first step is to identify the problem or question that needs to be addressed. This involves understanding the context and the specific requirements of the task.

11. The gateway of Claim 1, further comprising an IEEE 802.6 bus operable to communicate the first data packets to a packetization module supporting the first data communication protocol and to communicate the first telecommunication information to a telecommunication interface module coupled to the first telecommunication interface.

12. The gateway of Claim 1, further comprising one or more echo cancellation modules operable to perform echo cancellation on the first telecommunication information but not the second telecommunication information

13. A method for communicating telecommunication information, comprising:

receiving first data packets from a first broadband network using a first data communication protocol;

extracting first telecommunication information associated with a first subscriber from the first data packets;

communicating the first telecommunication information to a telecommunication network using a first interface associated with the first subscriber;

receiving second data packets from a second broadband network using a second data communication protocol;

extracting second telecommunication information associated with a second subscriber from the second data packets; and

communicating the second telecommunication information to the telecommunication network using a second interface associated with the second subscriber.

14. The method of Claim 13, further comprising:

associating each of a plurality of subscribers with a data network address; and

identifying the first subscriber associated with the first telecommunication information according a data network address of the first data packets.

15. The method of Claim 13, further comprising identifying the first subscriber associated with the first telecommunication information according to a subscriber identifier included in the first data packets.

16. The method of Claim 15, wherein the subscriber identifier is a name, address, or telephone number.

17. The method of Claim 13, further comprising:
de-compressing the first telecommunication information using a first
compression algorithm associated with the first subscriber; and
de-compressing the second telecommunication information using a second
compression algorithm associated with the second subscriber.

18. The method of Claim 17, further comprising:
storing a first subscriber profile associating the first subscriber with the first
telecommunication interface and the first compression algorithm; and
storing a second subscriber profile associating the second subscriber with the
second telecommunication interface and the second compression algorithm.

19. The method of Claim 17, further comprising:
selecting a first compression module supporting the first compression
algorithm for de-compressing the first subscriber's telecommunication information;
and
selecting a second compression module supporting the second compression
algorithm for de-compressing the second subscriber's telecommunication information.

20. The method of Claim 13, further comprising assigning one or more
time slots in a time division multiplexing (TDM) bus to communicate the first
telecommunication information to a telecommunication interface module coupled to
the first telecommunication interface.

21. The method of Claim 13, further comprising:
receiving the first data packets from a digital subscriber line multiplexer
(DSLAM); and
receiving the second data packets from a cable modem termination system
(CMTS) or a base station controller (BSC).

communicating the first data packets to a packetization module supporting the first data communication protocol using a data packet bus; and

5

communicating the first data packets to a packetization module supporting the first data communication protocol using an IEEE 802.6 bus; and

10

performing echo cancellation on the first telecommunication information; and
bypassing echo cancellation for the second telecommunication information.

20

25

communicating the second data packets from the CMTS to the second broadband network using the second data communication protocol.

communicating the first data packets from an integrated access device (IAD) to a digital subscriber line access multiplexer (DSLAM) using a digital subscriber line;

communicating the second data packets from a wireless network interface unit (WNIU) to a base station controller (BSC) using a wireless link; and

communicating the second data packets from the BSC to the second broadband network using the second data communication protocol.

communicating the first data packets from a media terminal adapter (MTA) to a cable modem termination system (CMTS) using a cable link;

communicating the first data packets from the CMTS to the first broadband network using the first data communication protocol;

communicating the second data packets from a wireless network interface unit (WNIU) to a base station controller (BSC) using a wireless link; and

communicating the second data packets from the BSC to the second broadband network using the second data communication protocol.

Sh
A10

a packetization module operable to receive data packets from a broadband network and to extract telecommunication information associated with a subscriber from the data packets using a data communication protocol associated with the subscriber; and

a telecommunication interface module operable to communicate the telecommunication information to a telecommunication network using a telecommunication interface associated with the subscriber.

29. The system of Claim 28, wherein:

the subscriber profiles associate each of the subscribers with a data network address; and

the packetization module is further operable to identify the subscriber associated with the telecommunication information according to a data network address of the data packets.

30. The system of Claim 28, wherein the packetization module is further operable to identify the subscriber associated with the telecommunication information according to a subscriber identifier included in the data packets.

31. The system of Claim 30, wherein the subscriber identifier is a name, address, or telephone number.

32. The system of Claim 28, further comprising:

a compression module operable to de-compress the telecommunication information using a compression algorithm associated with the subscriber; and

wherein the subscriber profiles associate each of the subscribers with a compression algorithm.

33. The system of Claim 28, further comprising a management module operable to select a compression module for de-compressing the telecommunication information according to a compression algorithm associated with the subscriber.

34. The system of Claim 28, further comprising a management module operable to assign one or more time slots in a time division multiplexing (TDM) bus to communicate the telecommunication information to the telecommunication interface module.

35. The system of Claim 28, further comprising:

a data packet bus coupled to the packetization module and operable to communicate the data packets to the packetization module; and

a time division multiplexing (TDM) bus coupled to the packetization module and operable to communicate the telecommunication information from the packetization module using one or more time slots.

36. The system of Claim 28, further comprising an IEEE 802.6 bus coupled to the packetization module and operable to communicate the data packets to the packetization module and to communicate the telecommunication information from packetization module.

SA

receiving data packets from a broadband network and extracting telecommunication information associated with a subscriber from the data packets using a data communication protocol associated with the subscriber; and

10

associating each of the subscribers with a data network address; and

15

20

25

30

43. The method of Claim 38, further comprising selecting a compression module for de-compressing the telecommunication information according to a compression algorithm associated with the subscriber.

5

10

15

20

25